

110TH CONGRESS  
1ST SESSION

# H. R. 2406

To authorize the National Institute of Standards and Technology to increase its efforts in support of the integration of the healthcare information enterprise in the United States.

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## IN THE HOUSE OF REPRESENTATIVES

MAY 21, 2007

Mr. GORDON of Tennessee introduced the following bill; which was referred to the Committee on Science and Technology

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## A BILL

To authorize the National Institute of Standards and Technology to increase its efforts in support of the integration of the healthcare information enterprise in the United States.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. FINDINGS.**

4 Congress finds the following:

5 (1) The National Institute of Standards and  
6 Technology, because of the electronic commerce, in-  
7 formation technology, security, and privacy expertise  
8 in its laboratories and the healthcare component of

1 the Malcolm Baldrige National Quality Award, and  
2 its long history of working with the information  
3 technology and healthcare industries, is well  
4 equipped to address the technical challenges posed  
5 by healthcare information enterprise integration.

6 (2) Therefore, it is in the national interest for  
7 the National Institute of Standards and Technology  
8 to accelerate its efforts—

9 (A) to develop standards, standards con-  
10 formance tests, and enterprise integration proc-  
11 esses that are necessary to increase efficiency  
12 and quality of care, and lower costs in the  
13 healthcare industry; and

14 (B) ensuring that all components of the  
15 United States healthcare infrastructure can be  
16 a part of an electronic information network that  
17 is reliable, interoperable, and secure, and pro-  
18 tects privacy.

19 **SEC. 2. HEALTHCARE INFORMATION ENTERPRISE INTE-**  
20 **GRATION INITIATIVE.**

21 (a) ESTABLISHMENT.—The Director of the National  
22 Institute of Standards and Technology shall establish an  
23 initiative for advancing healthcare information enterprise  
24 integration within the United States. In carrying out this  
25 section, the Director shall involve various units of the Na-

1 tional Institute of Standards and Technology, including its  
2 laboratories and the Malcolm Baldrige National Quality  
3 Program. This initiative shall build upon ongoing efforts  
4 of the National Institute of Standards and Technology,  
5 the private sector, and other Federal agencies, shall in-  
6 volve consortia that include government and industry, and  
7 shall be designed to permit healthcare information enter-  
8 prise integration.

9 (b) TECHNICAL ACTIVITIES.—In order to carry out  
10 this section, the Director may focus on—

- 11 (1) information technology standards and inter-  
12 operability analysis, which may include the develop-  
13 ment of technical testbeds;
- 14 (2) software conformance and certification;
- 15 (3) security and privacy;
- 16 (4) medical device communication;
- 17 (5) supporting the provisioning of technical ar-  
18 chitecture products for management and retrieval;
- 19 (6) supporting the establishment of conform-  
20 ance testing infrastructure;
- 21 (7) information management, including elec-  
22 tronic health records management and data summa-  
23 rization; and
- 24 (8) health information usability, access, and de-  
25 cision support.

1       (c) OTHER ACTIVITIES.—The Director may assist  
 2 healthcare representatives and organizations and Federal  
 3 agencies in the development of technical roadmaps that  
 4 identify the remaining steps needed to ensure that stand-  
 5 ards for application protocols, interoperability, data integ-  
 6 rity, and security and privacy, as well as the corollary con-  
 7 formance test protocols, will be in place. These roadmaps  
 8 shall rely upon voluntary consensus standards where pos-  
 9 sible.

10       (d) PLANS AND REPORTS.—Not later than 90 days  
 11 after the date of enactment of this Act, and annually  
 12 thereafter, the Director shall transmit a report to the  
 13 Committee on Science and Technology of the House of  
 14 Representatives and the Committee on Commerce,  
 15 Science, and Transportation of the Senate on the activities  
 16 of the National Institute of Standards and Technology  
 17 under this section.

18 **SEC. 3. FEDERAL HEALTHCARE INFORMATION TECH-**  
 19 **NOLOGY SYSTEMS AND INFRASTRUCTURE.**

20       (a) GUIDELINES AND STANDARDS.—Not later than  
 21 6 months after the date of enactment of this Act, the Di-  
 22 rector of the National Institute of Standards and Tech-  
 23 nology, in consultation with industry and appropriate Fed-  
 24 eral agencies, shall develop technology-neutral information  
 25 technology infrastructure guidelines and standards, or

1 adopt existing technology-neutral industry guidelines and  
2 standards, for use by Federal agencies to enable those  
3 agencies to effectively select and utilize healthcare infor-  
4 mation technologies in a manner that is—

5 (1) sufficiently secure and provides adequate  
6 privacy to meet the needs of those agencies, their  
7 transaction partners, and the general public; and

8 (2) interoperable, to the maximum extent pos-  
9 sible.

10 (b) ELEMENTS.—The guidelines and standards devel-  
11 oped under subsection (a) shall—

12 (1) promote the use by Federal agencies of  
13 commercially available products that incorporate the  
14 guidelines and standards developed under subsection  
15 (a);

16 (2) develop uniform testing procedures suitable  
17 for determining the conformance of commercially  
18 available and Federal healthcare information tech-  
19 nology products with the guidelines and standards;

20 (3) support and promote the testing of elec-  
21 tronic healthcare information technologies utilized by  
22 Federal agencies;

23 (4) provide protection and privacy profiles;

1           (5) establish a core set of interoperability speci-  
2       fications in transactions between Federal agencies  
3       and their transaction partners; and

4           (6) include validation criteria to enable Federal  
5       agencies to select healthcare information tech-  
6       nologies appropriate to their needs.

7       (c) REPORTS.—Not later than 18 months after the  
8       date of enactment of this Act, and annually thereafter,  
9       the Director shall transmit to the Congress a report that  
10      includes a description and analysis of—

11           (1) the level of interoperability, privacy, and se-  
12      curity of technologies for sharing healthcare infor-  
13      mation among Federal agencies; and

14           (2) the problems Federal agencies are having  
15      with, and the progress such agencies are making to-  
16      ward, ensuring interoperable, secure, and private  
17      healthcare information systems and electronic  
18      healthcare records.

19       (d) SENIOR INTERAGENCY COUNCIL ON FEDERAL  
20      HEALTHCARE INFORMATION TECHNOLOGY INFRASTRUC-  
21      TURE.—The Undersecretary of Commerce for Technology  
22      shall establish a Senior Interagency Council on Federal  
23      Healthcare Information Technology Infrastructure. The  
24      responsibilities of the Council are to—

1           (1) coordinate the development and deployment  
2           of healthcare information technology solutions across  
3           all Federal departments and agencies, with emphasis  
4           on interoperability, privacy, and security issues;

5           (2) coordinate the associated technology trans-  
6           fer to and from the private sector; and

7           (3) coordinate Federal funding and participa-  
8           tion in private, voluntary standards development or-  
9           ganizations, as related to electronic healthcare  
10          records systems.

11 **SEC. 4. RESEARCH AND DEVELOPMENT PROGRAMS.**

12          (a) HEALTHCARE INFORMATION ENTERPRISE INTE-  
13 GRATION RESEARCH CENTERS.—

14           (1) IN GENERAL.—The Director of the National  
15          Institute of Standards and Technology, in consulta-  
16          tion the Director of the National Science Foundation  
17          and other appropriate Federal agencies, shall estab-  
18          lish a program of assistance to institutions of higher  
19          education (or consortia thereof) that enter into part-  
20          nerships with for-profit entities or nonprofit entities  
21          to establish multidisciplinary Centers for Healthcare  
22          Information Enterprise Integration. The partner-  
23          ships may also include government laboratories.

1           (2) REVIEW; COMPETITION.—Grants shall be  
2           awarded under this subsection on a merit-reviewed,  
3           competitive basis.

4           (3) PURPOSE.—The purposes of the Centers  
5           shall be—

6                   (A) to generate innovative approaches to  
7                   healthcare information enterprise integration by  
8                   conducting cutting-edge, multidisciplinary re-  
9                   search on the systems challenges to healthcare  
10                  delivery; and

11                  (B) the development and use of informa-  
12                  tion technologies and other complementary  
13                  fields.

14           (4) RESEARCH AREAS.—Research areas may in-  
15           clude—

16                   (A) the interfaces between human informa-  
17                   tion and communications technology systems;

18                   (B) voice-recognition systems;

19                   (C) software that improves interoperability  
20                   and connectivity among systems;

21                   (D) software dependability in systems crit-  
22                   ical to healthcare delivery;

23                   (E) measurement of the impact of informa-  
24                   tion technologies on the quality and productivity  
25                   of healthcare;



1 (F) healthcare information enterprise man-  
2 agement; and

3 (G) information technology security and  
4 integrity.

5 (5) APPLICATIONS.—An institution of higher  
6 education (or a consortium thereof) seeking funding  
7 under this subsection shall submit an application to  
8 the Director at such time, in such manner, and con-  
9 taining such information as the Director may re-  
10 quire. The application shall include, at a minimum,  
11 a description of—

12 (A) the research projects that will be un-  
13 dertaken by the Center and the respective con-  
14 tributions of the participating entities;

15 (B) how the Center will promote active col-  
16 laboration among scientists and engineers from  
17 different disciplines, such as information tech-  
18 nology, biologic sciences, management, social  
19 sciences, and other appropriate disciplines;

20 (C) technology transfer activities to dem-  
21 onstrate and diffuse the research results, tech-  
22 nologies, and knowledge; and

23 (D) how the Center will contribute to the  
24 education and training of researchers and other

1 professionals in fields relevant to healthcare in-  
2 formation enterprise integration.

3 (b) NATIONAL INFORMATION TECHNOLOGY RE-  
4 SEARCH AND DEVELOPMENT PROGRAM.—The National  
5 High-Performance Computing Program established by  
6 section 101 of the High-Performance Computing Act of  
7 1991 (15 U.S.C. 5511) shall coordinate Federal research  
8 and development programs related to the development and  
9 deployment of health information technology, including ac-  
10 tivities related to—

- 11 (1) computer infrastructure;
- 12 (2) data privacy and security;
- 13 (3) development of large-scale, distributed, reli-  
14 able computing systems;
- 15 (4) wired, wireless, and hybrid high-speed net-  
16 working;
- 17 (5) development of software and software-inten-  
18 sive systems;
- 19 (6) human-computer interaction and informa-  
20 tion management technologies; and
- 21 (7) the social and economic implications of in-  
22 formation technology.

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